IN THE CLAIMS

A complete list of claims is presented below with amendments marked up:

1-12. (Canceled)

13. (Previously Presented) An apparatus comprising:

a wavelength switch module (WSM);

an optical transceiver, detachably coupled to the WSM, to send a first optical signal to the WSM and to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM; and

a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

14. (Original) The apparatus of claim 13, wherein the WSM includes a variable optical attenuator to vary power of the first optical signal before the first optical signal exits the WSM and the optical transceiver includes a light detector to measure power of the second optical signal to determine whether the power of the second optical signal changes in response to the first optical signal.

15. (Previously Presented) The apparatus of claim 13, wherein the optical transceiver includes a decoder to check whether the second optical signal includes the identification.

16. (Original) The apparatus of claim 13, wherein the WSM includes:

an input port;

an output port having a one-to-one correspondence with the input port; and

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port.

17. (Original) The apparatus of claim 16, wherein the optical transceiver comprises a light source, which is tunable to a wavelength designated to the channel.

18. (Previously Presented) A system comprising:

an optical network including a plurality of optical fibers; and

a first optical network node, coupled to the optical network, the first optical network node comprising:

a wavelength switch module (WSM);

an optical transceiver, detachably coupled to the WSM, to send a first optical signal to the WSM and to detect a second optical signal received from the WSM after sending the first optical signal, wherein the optical transceiver comprises an encoder to put an identification into the first optical signal to send with the first optical signal to the WSM; and

a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

19. (Original) The system of claim 18, wherein the WSM includes a variable optical attenuator to vary power of the first optical signal before the first optical signal exits the WSM and the optical transceiver includes a light detector to measure power of the second optical signal to determine whether the power of the second optical signal changes in response to the first optical signal.

20. (Previously Presented) The system of claim 18, wherein the optical transceiver includes a decoder to check whether the second optical signal includes the identification.

21. (Original) The system of claim 18, wherein the WSM includes:

an input port;

an output port having a one-to-one correspondence with the input port; and

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port.

22. (Original) The system of claim 21, wherein the optical transceiver comprises a light source, which is tunable to a wavelength designated to the channel.

23. (Canceled)

24. (Canceled)

25. (Canceled)

26. (Canceled)

27. (Previously Presented) A method to verify connectivity between an optical transceiver and a wavelength switch module (WSM), the method comprising:

putting an identification into a first optical signal using an encoder of the optical transceiver;

sending the first optical signal with the identification to the WSM from the optical transceiver;

detecting a second optical signal received from the WSM after sending the first optical signal; and

causing a set of one or more processors coupled to the WSM to automatically determine whether the second optical signal corresponds to the first optical signal in response to the identification and an interrupt from each of the WSM and the optical transceiver.

28. (Previously Presented) The method of claim 27, further comprising:

measuring power of the second optical signal, by a light detector of the optical transceiver, to determine whether the power of the second optical signal changes in response to the first optical signal, wherein the WSM includes a variable optical attenuator to vary power of the first optical signal before the first optical signal exits the WSM.

29. (Previously Presented) The method of claim 27, further comprising:

using a decoder of the optical transceiver to check whether the second optical signal includes the identification.

30. (Previously Presented) The method of claim 27, wherein the WSM includes:

an input port;

an output port having a one-to-one correspondence with the input port; and

a channel coupling the input port to the output port, wherein the first optical signal enters the WSM at the input port, passes through the channel, and exits through the output port.

31. (Previously Presented) The method of claim 30, further comprising:

tuning a light source of the optical transceiver to a wavelength designated to the channel.